



## Glossary of Terms used in Map Modernization

Term	Definition
<b>1% Annual Chance Flood and 1% Annual Chance Floodplain</b>	To provide a national standard without regional discrimination, the 1% annual chance (100-year) flood has been adopted by the Federal Emergency Management Agency as the base flood for floodplain management and flood insurance purposes. A 1% annual chance flood (or base flood) has a 1% annual chance of being equaled or exceeded in any given year. The 1% annual chance floodplain identifies areas that are expected to be inundated by the 1% annual chance flood. The 1% annual chance floodplain, shown on a Flood Insurance Rate Map, is also called a Special Flood Hazard Area, where the National Flood Insurance Program's floodplain management regulations must be enforced by the community as a condition of participation in the Program.
<b>0.2% Annual Chance Flood and 0.2 Annual Chance Floodplain</b>	The flood that has a 0.2% chance of being equaled or exceeded in any given year. Often referred to as the 500-year flood. The 0.2 percent annual chance floodplain is denoted on the FIRM as a shaded Zone X.
<b>90-Day Appeal Period</b>	Time period when community officials or individual property owners may submit formal objections to information shown on preliminary Flood Insurance Rate Map (FIRM) panels and/or Flood Insurance Study (FIS) Report to the Federal Emergency Management Agency (FEMA) and the Kentucky Division of Water (KDOW), through the local Floodplain Administrator. The appeal period begins with FEMA's second publication of the legal notice of proposed base (1% annual chance) flood elevations in the local newspaper.
<b>Appeal</b>	Formal objection to new or revised proposed base flood elevation(s) shown on a preliminary FIRM panel and/or in the FIS Report submitted by a community during the 90-day appeal period. Appeals are based on empirical data that show proposed base flood elevations to be scientifically or technically incorrect.
<b>Approximate Study</b>	A flood hazard study that results in the delineation of floodplain boundaries for the 1-percent annual chance flood, but does not include the determination of BFEs or flood depths. Associated with Zone A on the FIRM.
<b>Base Flood Elevation (BFE)</b>	BFEs are shown on a Flood Insurance Rate Map and represent rounded, whole-foot elevations of the 1% annual chance flood at selected locations along flooding sources that have been studied in detail. To reduce the risk of damage from floods up to the 1% annual chance flood, communities are advised to consider these elevations when issuing building permits for structures.

Term	Definition
<b>Community Rating System (CRS)</b>	Program that recognizes a community's efforts beyond the minimum National Flood Insurance Program standards by reducing flood insurance premiums for the community's property owners. Under the CRS, flood insurance premium rates are adjusted to reflect the reduced flood risk resulting from community activities that meet the three goals of the CRS: (1) reduce flood losses; (2) facilitate accurate insurance rating; and (3) promote the awareness of flood insurance.
<b>Compliance Period</b>	The period that begins with the issuance of a Letter of Final Determination and ends when a new or revised FIRM becomes effective. During the compliance period, a community must enact and adopt new or revised Flood Damage Prevention Ordinances required for participation in the NFIP.
<b>Cooperating Technical Partner (CTP)</b>	The Kentucky Division of Water, FEMA, and numerous other Federal, State, and local agencies have entered into a CTP agreement that formalizes their contribution and commitment to floodplain mapping. Under the agreement, the State has assumed primary ownership of, and responsibility for, the National Flood Insurance Program Flood Insurance Rate Maps for all Kentucky communities. Benefits of this partnership include an opportunity to share resources, maximize limited funding, and take advantage of training and mentoring opportunities.
<b>Cross Section</b>	Topographic information developed along a line across a riverine floodplain at which a computation of flood flow has been made to establish a potential flood elevation.
<b>Detailed Study</b>	An engineering analysis that identifies 1% annual flood elevations. This study method uses digital elevation data, supplementing the data with field surveys for channel bathymetry, bridge/culvert opening geometry, and channel and floodplain characteristics in order to conduct fully detailed hydrologic and hydraulic analyses and floodplain mapping.
<b>Digital Elevation Model (DEM)</b>	A DEM is a file with terrain elevations recorded for the intersection of a fine-grained grid and organized by quadrangle as the digital equivalent of the elevation data on a topographic base map.
<b>Digital Orthophoto Quadrangle (DOQ)</b>	A DOQ is a digital image of an aerial photograph in which displacements caused by camera orientation and terrain have been removed. These products combine the image characteristics of a photograph with the geometric qualities of a map and can be used in numerous applications either alone or in combination with other digital data.
<b>Effective Date</b>	Date of which the Flood Insurance Study Report and Flood Insurance Rate Map become the official documents for flood insurance rating and floodplain management purposes.
<b>Emergency Program</b>	The Federal Program intended to provide insurance on all insurable structures before the initial Flood Insurance Rate Map is prepared.
<b>Flood Boundary and Floodway Map (FBFM)</b>	The floodplain management map issued by FEMA that depicts, based on detailed flood hazard analysis, the boundaries of the 1-percent annual chance and the 0.2% annual chance floodplains and, when appropriate, the regulatory floodway. The FBFM does not show flood insurance risk zones or BFEs.

Term	Definition
<b>Flood Elevation Determination Docket (FEDD)</b>	A file maintained during the Post Preliminary Processing Phase that included all correspondence between the CTP and the community concerning a flood study including letters, meeting minutes, relevant publications (e.g. newspaper notices), Letters of Final Determination, and a copy of the FIRM and FBFM.
<b>Flood Hazard Boundary Map (FHBM)</b>	The initial insurance map issued by FEMA that identifies, based on approximate analysis, the areas of the 1-percent annual chance flood hazard within a community.
<b>Flood Insurance Rate Map (FIRM)</b>	The FIRM illustrates the extent of flood hazards in a community by depicting a variety of types of information. This information may include flood insurance risk zones, 1% and 0.2% annual chance floodplains, floodways, base flood elevations or depths, common physical features such as roads and streams, and the location of cross sections.
<b>Flood Insurance Study (FIS)</b>	The FIS is an examination, evaluation, and determination of flood hazards, and, if appropriate, corresponding water-surface elevations. The FIS includes the FIS Report, Flood Insurance Rate Map panels, flood profiles, and tables.
<b>Flood Insurance Study (FIS) Report</b>	A comprehensive document describing a FIS that typically includes a description of the hydrologic and hydraulic analyses, profiles, and tables. This information is used by local and regional planners to further promote sound land use and floodplain development.
<b>Floodplain Management</b>	The operation of an overall program of corrective and preventive measures for reducing flood damage, including, but not limited to, emergency preparedness plans, flood control works, and floodplain management regulations.
<b>Flood Profile</b>	A flood profile shows calculated flood elevations of various recurrence periods along streams studied in detail. Flood Profiles serve as a basis for determining flood insurance rate zones for the flooding sources.
<b>Floodway</b>	See "Regulatory Floodway."
<b>Freeboard</b>	An additional amount of height above a flood elevation used as a factor of safety (e.g., 1 foot above the base flood elevation) in determining the level at which a structure's lowest floor must be elevated or floodproofed to be in accordance with State or community floodplain management regulations.
<b>Geographic Information System (GIS)</b>	A GIS is a system of computer hardware, software, and procedures designed to support the capture, management, manipulation, analysis, modeling, and display of spatially referenced data for solving complex planning and management problems.
<b>Grandfathering</b>	An exemption based on circumstances previously existing. Under the National Flood Insurance Program, buildings located in Emergency Program communities and Pre-Flood Insurance Rate Map (Pre-FIRM) buildings in the Regular Program are eligible for subsidized flood insurance rates. Post-Flood Insurance Rate Map (Post-FIRM) buildings in the Regular Program built in compliance with the floodplain management regulations in effect at the start of construction will continue to have favorable rate treatment even though higher Base (1% annual chance) Flood Elevations or more restrictive risk zone designations result from Flood Insurance Rate Map revisions.

Term	Definition
<b>HEC-RAS</b>	A hydraulic model designed to perform one-dimensional hydraulic calculations for a full network of natural and constructed channels.
<b>Letter of Final Determination (LFD)</b>	The letter in which FEMA announces its final determination regarding the flood hazard information presented on a new or revised FIRM, FIS, and FBFM for a particular community. In the LFD, FEMA begins the compliance period and establishes the effective date for the new or revised FIRM.
<b>Letter of Map Change (LOMC)</b>	A term used to inclusively define a FEMA letter related to a Flood Insurance Rate Map or Flood Hazard Boundary Map using one or more of the following processes: Letter of Map Amendment (LOMA), Letter of Map Revision (LOMR), Letter of Map Revision based on Fill (LOMR-F) as well as Conditional Letter of Map Revision (CLOMR) and Conditional Letter of Map Revision based on Fill (CLOMR-F).
<b>Levee</b>	A man-made structure, usually an earthen embankment, designed to contain, control, or divert the flow of water to provide flood protection.
<b>Light Detection and Ranging (LIDAR)</b>	LIDAR refers to an instrument that measures distance to a reflecting object by emitting timed pulses of laser light and measuring the time between emission and reception of reflected pulses. The measured time interval is converted to distance. Airborne LIDAR systems incorporate laser scanners that emit up to 50,000 pulses per second and track the origin and orientation of each pulse through the use of airborne GPS and inertial measurement units so that 3-D coordinates of thousands of points on the ground can be accurately mapped each second of flight. To obtain bare-earth elevations, the LIDAR data are postprocessed to remove elevations on rooftops and dense vegetation not penetrated by the laser light.
<b>Limited Detailed Study</b>	An analysis that depicts the 1% annual chance floodplain, Base Flood Elevations, cross-section locations, and stream stations, typically for streams that were previously mapped with a Zone A (approximate) floodplain. Profiles will not be provided for streams studied by limited detailed methods.
<b>National Flood Insurance Program (NFIP)</b>	Administered by FEMA, the NFIP enables property owners in participating communities to purchase insurance protection against losses from flooding, provides a framework for a community's floodplain management ordinances, and identifies floodplain areas and flood risk zones.
<b>North American Vertical Datum of 1988 (NAVD 88)</b>	For the floodplain maps being produced by the Commonwealth, a new vertical datum will be used — NAVD 88. A vertical datum is a set of constants that define a system for comparison of elevations. For floodplain mapping, elevations need to be referenced to the same system. Historically, the National Geodetic Vertical Datum of 1929 was used for floodplain maps, however, this older vertical datum is flawed because of erroneous assumptions.
<b>Ordinance</b>	Legally enforceable floodplain management regulation adopted by a community to enforce the minimum requirements set forth in Section 60.3 of the National Flood Insurance Program regulations or more restrictive measures required by the State and/or community.

Term	Definition
<b>Preliminary DFIRM and FIS</b>	A preliminary Flood Insurance Study Report and Flood Insurance Rate Map are issued to a community for review before finalization. Notice of where the public can review the preliminary Flood Insurance Study Report and Flood insurance Rate Map is published in a local newspaper.
<b>Protest</b>	Formal objection to any new or revised information shown on a preliminary FIRM panel and/or in the FIS Report submitted by the community during the 90-day appeal period that does not involve base flood elevations. Protests generally involve comments regarding the delineation of the updated floodplain boundaries and floodways, corporate limits, stream names, and road names and locations.
<b>Redelineation</b>	This study method involves no new hydrologic or hydraulic analyses, but uses digital elevation data and effective flood elevations to revise the 1% and 0.2% annual chance flood hazard area.
<b>Regular Program</b>	The Program under which risk premium rates are required in participating communities as a prerequisite for procurement of a Federal loan for all new construction and substantial improvements started on or after the effective date of the Flood Insurance Rate Map, or after December 31, 1974, for Flood Insurance Rate Maps effective on or before that date. Buildings in which construction started before the effective date of the Flood Insurance Rate Map (or before January 1, 1975, for Flood Insurance Rate Maps effective before that date) are eligible for coverage at either subsidized rates or current risk premium rates, whichever are lower.
<b>Regulatory Floodway</b>	The floodway is the channel of a stream, plus any adjacent floodplain areas, that must be kept free from encroachment so that the 1% annual chance flood can be carried without substantial increases in flood heights. Minimum Federal standards limit such increases to 1.0 foot; however, communities can develop more stringent standards. Regulatory floodways are depicted on a Flood Insurance Rate Map and are presented to communities as a minimum standard that must be adopted.
<b>Scoping</b>	<p>Determining what areas are floodprone and need to have flood hazard data developed, what methods will be used to generate these data, and how the data will be presented on a Flood Insurance Rate Map. A comprehensive scoping phase may entail:</p> <ul style="list-style-type: none"> <li>• Researching and inventorying available elevation, flood hazard, and digital base map data that may be useful for preparing updated digital Flood Insurance Rate Map panels;</li> <li>• Assessing existing flood hazard data (e.g., flood elevation profiles, floodplain boundaries, floodways, coastal hazard zones) on effective Flood Insurance Rate Maps for accuracy;</li> <li>• Outreach to, and input from, counties and communities regarding their needs for updated Flood Insurance Rate Maps;</li> <li>• Identifying data that need to be developed or acquired, such as digital base maps, digital elevation models, or field surveys of stream channels, and hydraulic structures;</li> <li>• Determining the proposed scales and paneling scheme for digital Flood Insurance Rate Map production; and</li> <li>• Developing a schedule for completion of updated flood hazard data and digital Flood Insurance Rate Map production.</li> </ul>

Term	Definition
<b>Special Flood Hazard Area (SFHA)</b>	See "1% Annual Chance Flood and 1% Annual Chance Floodplain."
<b>Special Problems Report (SPR)</b>	A report, prepared by the Flood Hazard Mapping Partner that is performing an engineering study or other mapping activity, that documents special problems or issues encountered during the performance of the work.
<b>Summary of Map Actions (SOMA)</b>	A compilation of all Letters of Map Change in a given community issued since the effective date of the most recent Flood Insurance Rate Map. The Letters of Map Change are categorized based on whether the information was incorporated into the new maps, not incorporated, or superseded by new flood hazard data.
<b>Technical Support Data Notebook (TSDN)</b>	The format for the file that contains all of the technical and administrative support data for a community for which FEMA published a FIRM.
<b>Watershed</b>	The area draining into a river, river system, or body of water.